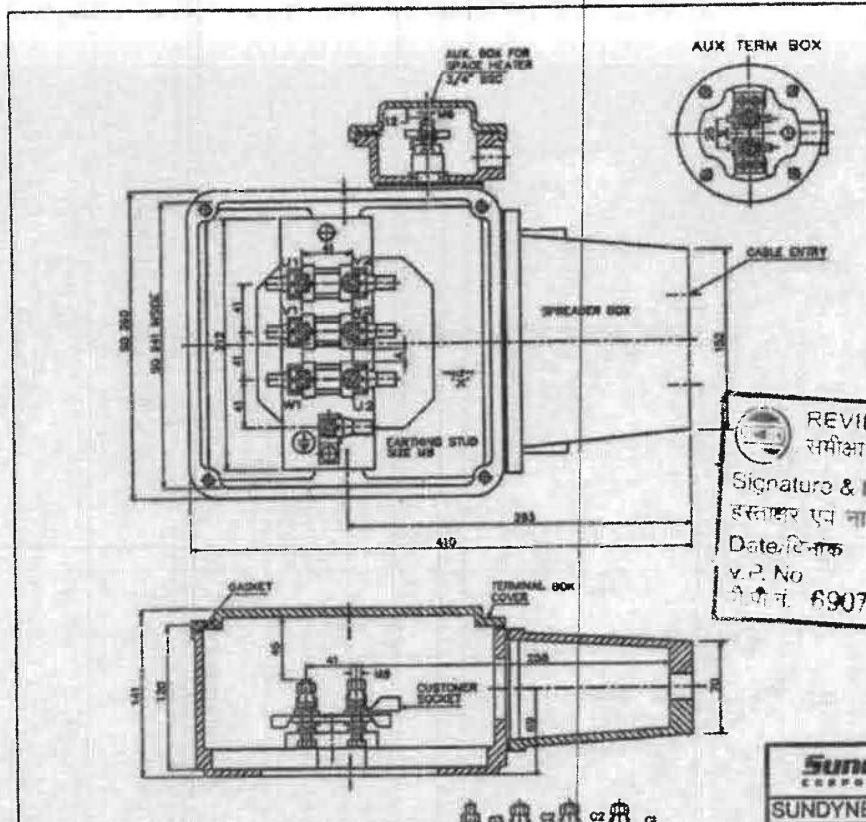
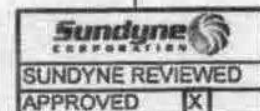


Purchaser	Sundyne Asia Japan Co. Ltd
Owner/User	Brahmaputra Cracker & Polymer Ltd.
Location	Lepetkata, India
P.O.#	BCPL/C&P/6907/MR-549
Model Type	LMV-311
Item #	117-PA-943
Service	Pentane Startup Pump
Serial No.	A1965277-11

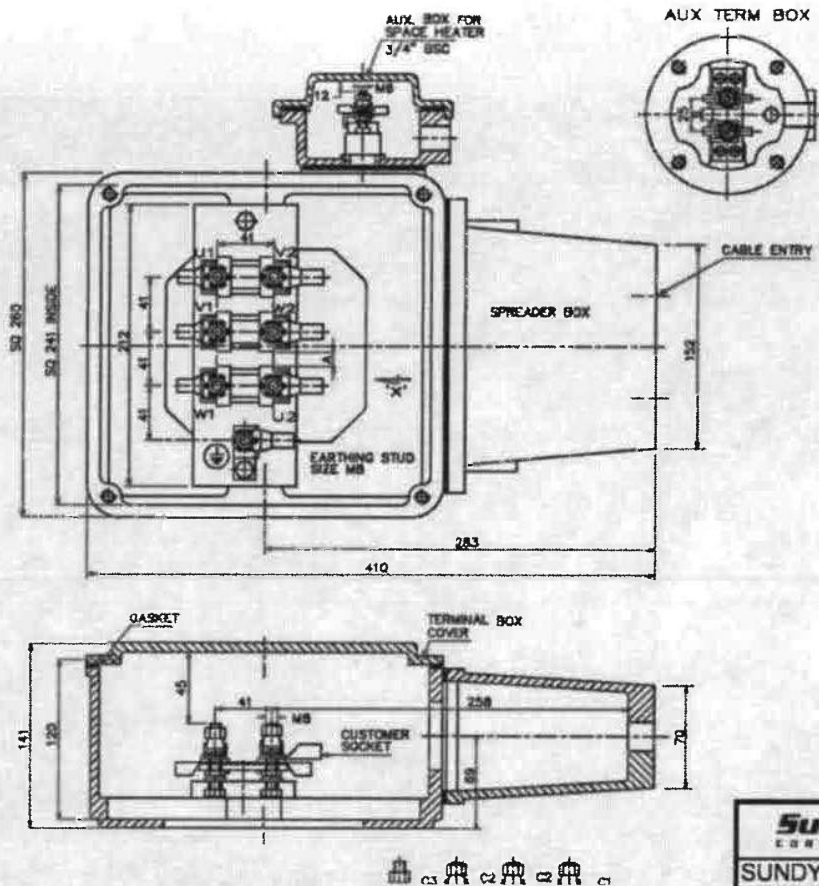


REVIEW CODE	1	2	3
समीक्षा कोड			
Signature & Name	[Signature]		
हस्ताक्षर एवं नाम	[Signature]		
Date/दिनांक	[Date]		
v.p. No	[v.p. No]		
व.प. नं.	6907/6957		



PROVIDED	SPACE HEATER	THERMISTOR	ET SIZE	RTD
CABLE SIZE	YES	NA	1.5" BSC 1-No.	NA
MAIN CABLE SIZE:	1X2CX2.5mm ²	NA		NA
CUSTOMER:	SUNDYNE CORPORATION		KW	30
P.O. NO	1523765 OP		FRAME	ND200L
IND. NO:	0413549346/500		POLE	2
CLIENT:	Tag No. 117-PM-943			
PROJECT:	ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED			
DRN	NAME	DATE	SCALE: NTS	
CHD	SBK	18/10/11	Rev.	
APPROVED	DNB	18/10/11	DI	
Crompton Greaves Limited LT Motors Division Ahmednagar			TITLE TERMINAL BOX ARRANGEMENT	SEA4296R3

Purchaser	Sundyne Asia Japan Co. Ltd
Owner/User:	Brahmaputra Cracker & Polymer Ltd.
Location:	Lepetkata, India
P.O.#:	BCPL/C&P/8907/MR-549
Model Type	LMV-311
Item #:	117-PA-943
Service:	Pentane Startup Pump
Serial No.:	A1995277-11



	
SUNDYNE REVIEWED	
APPROVED	X

PROVIDED	SPACE HEATER	THERMISTOR	ET SIZE	RTD
CABLE SIZE	YES	NA		NA
MAIN CABLE SIZE:	1X2CX2.5mm ²	NA	1.5" BSC 1-No.	NA
CUSTOMER:	SUNDYNE CORPORATION		kW	30
P.O.NO	1523765 OP		FRAME	ND200L
IND.NO:	0413549346/500		POLE	2
CLIENT:				
PROJECT:	Tag No. 117-PM-943			
DRN	NAME	DATE	ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED	
CHD	SBK	18/10/11	SCALE: NTS	
APPROVED	SBK	18/10/11	Rev.	
	DNB	18/10/11	Dt.	
 Crompton Greaves Limited LT Motors Division Ahmednagar			TITLE TERMINAL BOX ARRANGEMENT	
			SEA4296R3	

 CROMPTON GREAVES LTD. LT MOTORS DIVISION AHMEDNAGAR		CUSTOMER : SUNDYNE CORPORATION	
		INDENT NO : 0413549348/500	
		PO NO : 1523785 CP	
		PO DATE : 07/19/2011	
		DATE : 10/10/2011	
QUANTITY		2	
DRIVEN EQUIPMENT		As Per Customer	
DUTY		S1	
MANUFACTURER		CROMPTON GREAVES LTD.	
TYPE		3PHASE, AC SQUIRREL CAGE INDUCTION MOTOR	
FRAME DESIGNATION		ND200L	
OUTPUT ----- KW		30	
VOLTAGE ----- VOLT		415.0, +-10%	
FULL LOAD CURRENT----- AMP		52.00	
FULL LOAD SPEED ----- RPM		2950	
ENCLOSURE		NCN SPARKING ENCLOSURE ZONE II , TEMPERATURE CLASS T3	
TYPE OF PROTECTION		IP55	
GAS GROUP		IIA, IIB	
MOUNTING		V1	
AMB. TEMP/TEMP RISE ----- °C		45°C/75 Degc (BY RESISTANCE METHOD)	
FULL LOAD TORQUE ----- KGM		9.91	
APPLICABLE CODE		IS:1231, IS:12075, IS:12065, IS:325,	
STARTING TORQUE AS --- %FLT		200	
%EFF @100% LOAD		91.5	
%EFF @75% LOAD		91	
%EFF @50% LOAD		89	
ROTATION VIEWED FROM DE		Clockwise from DE	
BEARING TYPE --- DE/ODE		6312-2RS/6212-2RS	
TYPE OF LUBRICATION		Greased for life	
NET WEIGHT (APPR.) --- KG		252	
TYPE OF COUPLING		NOT SPECIFIED	
CABLE SIZE TYPE --- mm. sq		1 * 3C, 50-MM²	
PHASE/COVN/NO OF TERMINAL		3/Delta/6	
FREQUENCY ----- Hz		50.0, +-5%	
INSULATION CLASS		F (Temp. rise limited to class 'B')	
No. OF POLES		2	
LOCKED ROTOR CURRENT %FLC		600	
LR WITHSTD TIME HOT/COLD		12/24.	
STATOR THERMAL TIME CONST MIN		45	
PF @ 100% LOAD		0.87	
PF @ 75% LOAD		0.84	
PF @ 50% LOAD		0.8	
PULL OUT TORQUE --- %FLT		250	
SPACE HEATERS - WATTS/VOLTS		SPACE HEATER 60Wx1 (200/225)	
ACCESSORIES		Canopy required,	
PAINT SHADE		ACP 632	
TB POSITION FROM DE		RHS FROM DE	
Load GD SQ. (KG-M²)		0.67	
MOTOR GD SQ. (KG-M²)		0.67	
STARTING TIME @100% V SEC		1	
TYPE OF STARTING		Direct On Line	
NOISE LEVEL		As Per IS:12065	
VIBRATION		As per IS:12075	
RVIRA			

REVIEW CODE	1	2	3
Signature & Name	[Signature]		
Date	15/11/11		
V.P. No.	6907/695		

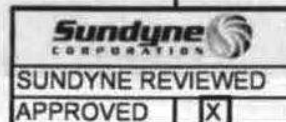
Purchaser	Sundyne Asia Japan Co. Ltd
Owner/User	Brahmaputra Cracker & Polymer Ltd.
Location	Lepakata, India
P.O.#	BCPL/C&P/9907/MR-549
Model Type	LMV-311
Item #	117-PA-843
Service	Pentane Startup Pump
Serial No.	A1995277-11

NOTE : 1) ALL PERFORMANCE FIGURES ARE SUBJECT TO IS 325 - 1999 TOLERANCES.
2) FOR INVERTER DRIVEN MOTORS, MAX. ALLOWED %THD FOR VOLTAGE = 3% AND TEMPERATURE RISE IS LIMITED TO CLASS F LIMITS
3) FOR INVERTER DRIVEN MOTORS, VOLTAGE SPIKES ARE ALLOWED MAXIMUM 1800 V AND MIN. RISE TIME OF 0.1 MICROSECOND. CABLE LENGTH TO BE SELECTED ACCORDINGLY.
ISSUED BY : Prashant Pujan
LT MOTORS DIVISION, AHMEDNAGAR

	
SUNDYNE REVIEWED	
APPROVED	X

	CUSTOMER : SUNDYNE CORPORATION	
	INDENT NO : 0413549348/500	
	PO NO : 1523765 OP	
CROMPTON GREAVES LTD. LT MOTORS DIVISION AHMEDNAGAR	PO DATE : 07/19/2011 DATE : 10/10/2011	
QUANTITY	2	
DRIVEN EQUIPMENT	As Per Customer	
DUTY	S1	
MANUFACTURER	CROMPTON GREAVES LTD.	
TYPE	3PHASE, AC SQUIRREL CAGE INDUCTION MOTOR	
FRAME DESIGNATION	ND200L	
OUTPUT ----- KW	30	
VOLTAGE ----- VOLT	415.0, +-10%	
FULL LOAD CURRENT----- AMP	52.00	
FULL LOAD SPEED ----- RPM	2950	
ENCLOSURE	NON SPARKING ENCLOSURE ZONE II , TEMPERATURE CLASS T3	
TYPE OF PROTECTION	IP55	
GAS GROUP	IIA, IIB	
MOUNTING	V1	
AMB. TEMP/TEMP RISE ----- °C	45°C/75 Degc (BY RESISTANCE METHOD)	
FULL LOAD TORQUE ----- KGM	9.91	
APPLICABLE CODE	IS:1231, IS:12075, IS:12065, IS:325,	
STARTING TORQUE AS --- %FLT	200	
%EFF @100% LOAD	91.5	
%EFF @75% LOAD	91	
%EFF @50% LOAD	89	
ROTATION VIEWED FROM DE	Clockwise from DE	
BEARING TYPE --- DE/ODE	6312-2RS/6212-2RS	
TYPE OF LUBRICATION	Greased for life	
NET WEIGHT (APPR.) --- KG	252	
TYPE OF COUPLING	NOT SPECIFIED	
CABLE SIZE TYPE --- mm. sq	1 * 3C, 50-MM ²	
PHASE/CONN/NO OF TERMINAL	3/Delta/6	
FREQUENCY ----- Hz	50.0, +-5%	
INSULATION CLASS	F (Temp. rise limited to class 'B')	
No. OF POLES	2	
LOCKED ROTOR CURRENT %FLC	600	
LR WITHSTD TIME HOT/COLD	12/24.	
STATOR THERMAL TIME CONST MIN	45	
PF @-100% LOAD	0.87	
PF @ 75% LOAD	0.84	
PF @- 50% LOAD	0.8	
PULL OUT TORQUE --- %FLT	250	
SPACE HEATERS - WATTS/VOLTS	SPACE HEATER 60WX1 (200/225)	
ACCESSORIES	Canopy required,	
PAINT SHADE	ACP 632	
TB POSITION FROM DE	RHS FROM DE	
Load GD SQ. (KG-M ²)	0.67	
MOTOR GD SQ. (KG-M ²)	0.67	
STARTING TIME @100% V SEC	1	
TYPE OF STARTING	Direct On Line	
NOISE LEVEL	As Per IS:12065	
VIBRATION	As per IS:12075	
RV/RA		
		Purchaser: Sundyne Asia Japan Co. Ltd Owner/User: Brahmaputra Cracker & Polymer Ltd. Location: Lepetkata, India P.O.#: BCPL/C&P/6907/MR-549 Model Type: LMV-311 Item #: 117-PA-943 Service: Pentane Startup Pump Serial No.: A1995277-11

NOTE : 1) ALL PERFORMANCE FIGURES ARE SUBJECT TO IS 325 - 1996 TOLERANCES.
2) FOR INVERTER DRIVEN MOTORS, MAX. ALLOWED %THD FOR VOLTAGE = 3%
AND TEMPERATURE RISE IS LIMITED TO CLASS F LIMITS
3) FOR INVERTER DRIVEN MOTORS, VOLTAGE SPIKES ARE ALLOWED MAXIMUM 1600 V
AND MIN. RISE TIME OF 0.1 MICROSECOND. CABLE LENGTH TO BE SELECTED ACCORDINGLY.
ISSUED BY : Prashant Pujari
LT MOTORS DIVISION , AHMEDNAGAR



Purchaser: Sundyne Asia Japan Co. Ltd.
 Owner/User: Brahmaputra Cracker & Polymer Ltd.
 Location: Lepetkata, India
 P.O.#: BCPL/C&P/6907/MR-549
 Model Type: LMV-311
 Item #: 117-PA-943
 Service: Pentane Startup Pump
 Serial No.: A1995277-11

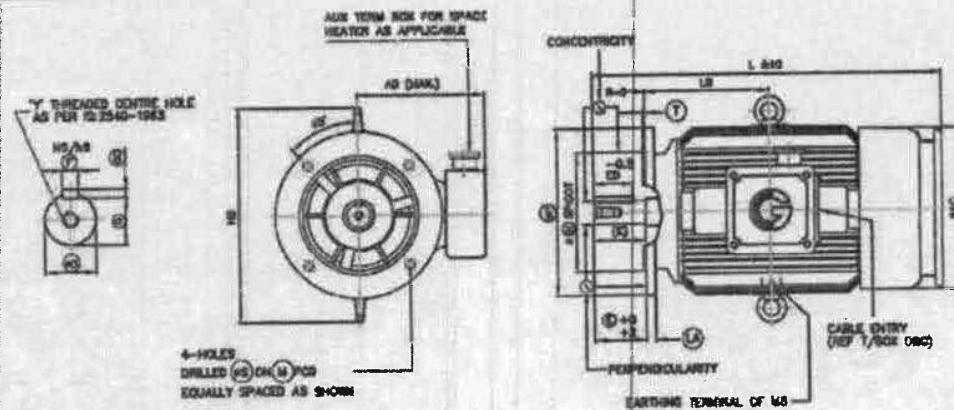
DIMENSION DRAWING OF 3 PH SQUIRREL CAGE TEFC FLANGE MOUNTED INDUCTION MOTOR

PROJECTION



DO NOT SCALE

PLEASE ASK IF IN DOUBT



RINGED DIMENSIONS ARE AS PER IS 2253
 ALL DIMENSIONS ARE IN mm

FRAME SIZE	FLANGE FIXING						OVER ALL				
	M TO	N TO	P	S	T	LA	AD	AC	L	HE	HP
ND200L	350.5 / 348.5	300.016 / 299.982	400	19	5	18	430	420	630	285	285

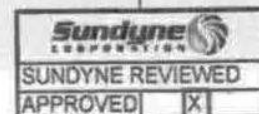
REVIEW CODE: ☒ 2 ☐ 3
 REVISION NO.
 Signature & Name: Vinay
 Date: 15/11/11
 P. No. 6907/6757

SHAFT AND KEY						
D TOL	E	ED	F TOL	GD TOL	G	Y
55.030 / 55.011	110	80	16.00 / 15.957	10.0 / 9.9	46.0 / 45.5	M20X40

FRAME SIZE	CONCENTRICITY MICRON	PERPENDICULARITY IN MICRON	RUNOUT IN MICRON
ND200L	125	125	50

ERTL Test Report ERTL(EYTES/C184/0004/03-10 Dt. 24/03/2010)

CCE Letter No. A/P/HQ/MH/104/2109(P251254) Dt. 17/06/2010



CUSTOMER	SUNDYNE CORPORATION	KW	30
P.O. NO.	1523785 OP	FRAME	ND200L
IND. NO.	0413548348/500	POLE	2
CLIENT		TAG NO.	117-PM-943
PROJECT			
DRN	SBK	DATE	18-Oct-11
CHD	SBK	DATE	18-Oct-11
APPROVED	DNB	DATE	18-Oct-11
ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED			
Crompton Greaves Limited LT Motors Division Ahmednagar		TITLE OUTLINE DIMENSION DRAWING	
		ND160V1	

Purchaser	Sundyne Asia Japan Co. Ltd
Owner/User	Brahmaputra Cracker & Polymer Ltd.
Location	Lapetkata, India
P.O.#	BCPL/C&P/8907/MR-549
Model Type	LMV-311
Item #	117-PA-943
Service	Pentane Startup Pump
Serial No.	A1995277-11

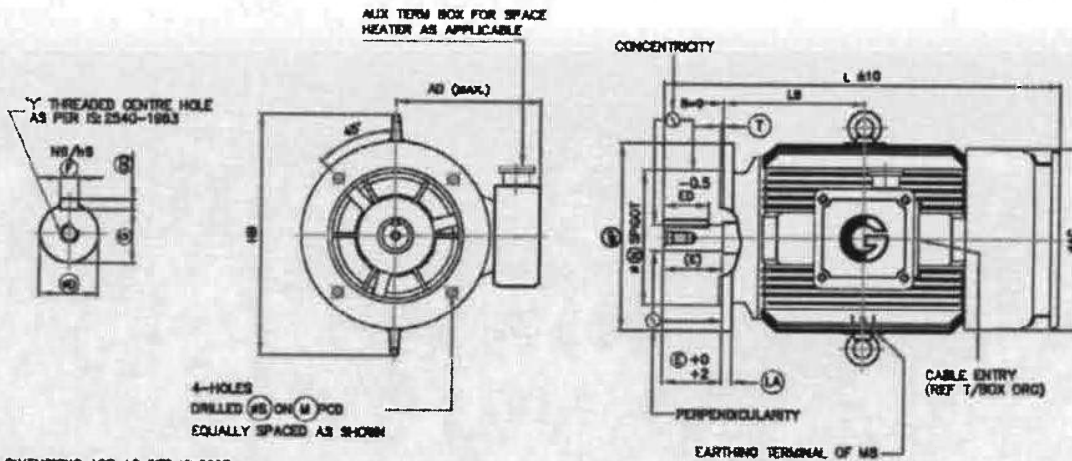
DIMENSION DRAWING OF 3 PH SQUIRREL CAGE TEFC FLANGE MOUNTED INDUCTION MOTOR

PROJECTION



DO NOT SCALE

PLEASE ASK, IF IN DOUBT



RINGED DIMENSIONS ARE AS PER IS:2223
ALL DIMENSIONS ARE IN mm

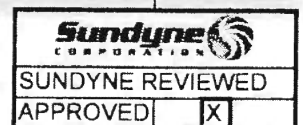
FRAME SIZE	FLANGE FIXING						OVER ALL				
	M Tol	N Tol	P	S	T	LA	AD	AC	L	HD	HA
ND200L	350.5 / 349.5	300.018 / 299.982	400	19	5	18	430	428	830	285	557

SHAFT AND KEY						
D TOL	E	ED	F TOL	GD TOL	G	Y
55.030 / 55.011	110	80	16.00 / 15.957	10.0 / 9.9	49.0 / 48.8	M20X40

FRAME SIZE	CONCENTRICITY MICRON	PERPENDICULARITY IN MICRON	RUNOUT IN MICRON
	NORM CLASS	NORM CLASS	SHAFT
ND200L	125	125	60

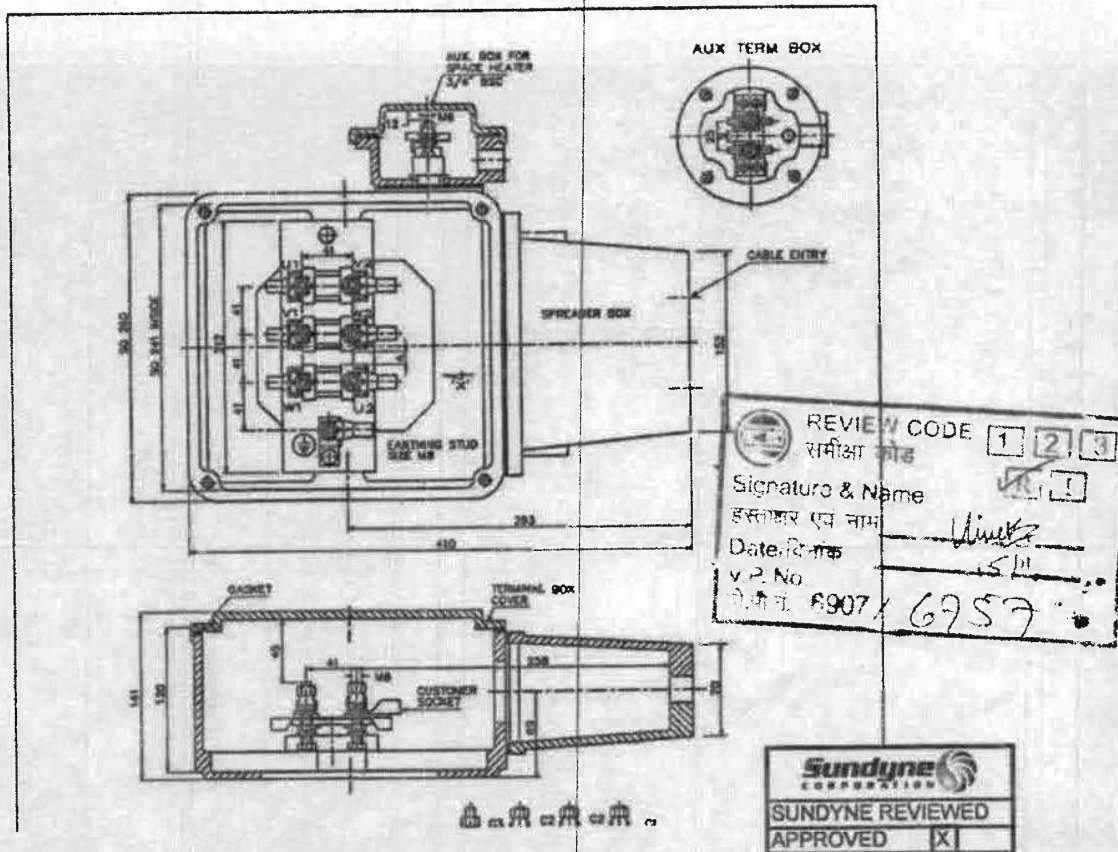
ERTL Test Report ERTL(E)/TES/C184/0004/03-10 Dt. 24/03/2010

CCE Letter No. A/P/HQ/MH/104/2109(P251254) Dt. 17/06/2010



CUSTOMER	SUNDYNE CORPORATION		kW	30
P.O. NO.	1523765 OP		FRAME	ND200L
IND. NO.	0413549346/500		POLE	2
CLIENT			TAG NO.	117-PM-943
PROJECT				
DRN	NAME	DATE	ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED	
CHD	SBK	18-Oct-11		
APPROVED	DNB	18-Oct-11		
Crompton Greaves Limited LT Motors Division Ahmednagar			TITLE OUTLINE DIMENSION DRAWING	
			ND160V1	

Purchaser	Sundyna Asia Japan Co. Ltd
Owner/User	Brahmaputra Cracker & Polymer Ltd.
Location	Lepatskata, India
P.O.#	BCLPC&P8907/MR-549
Model Type	LMV-311
Item #	117-PA-943
Service	Pentane Startup Pump
Serial No.	A1985277-11

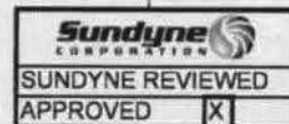
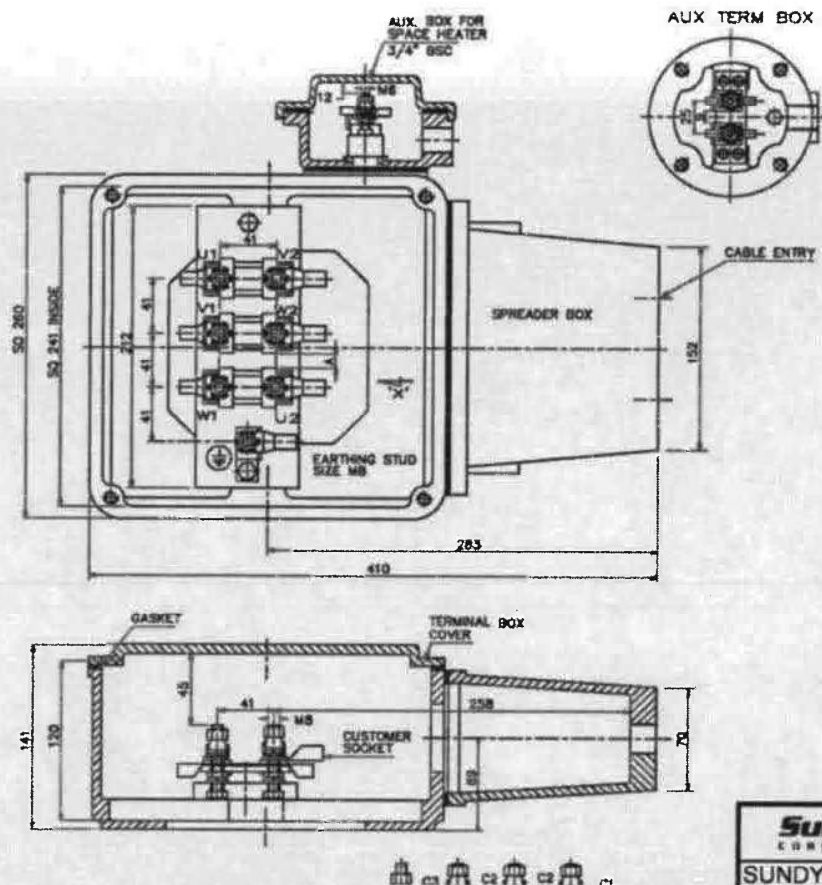


	SPACE HEATER	THERMISTOR	ET SIZE	RTD
PROVIDED	YES	NA		NA
CABLE SIZE	1X2CX2.5mm ²	NA	1.6" BSC 1-No.	NA
MAIN CABLE SIZE:	1 * 3C, 50-MM ²			
CUSTOMER:	SUNDYNE CORPORATION		KW	30
P.O.NO	1523765 OP		FRAME	ND200L
IND.NO:	0413548348/500		POLE	2
CLIENT:				
PROJECT:		Tag No.	117-PM-943	

NAME	DATE	ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED	
SBK	18/10/11	SCALE:	NTS
SBK	18/10/11	Rev.	
APPROVED	DNB	18/10/11	Di.

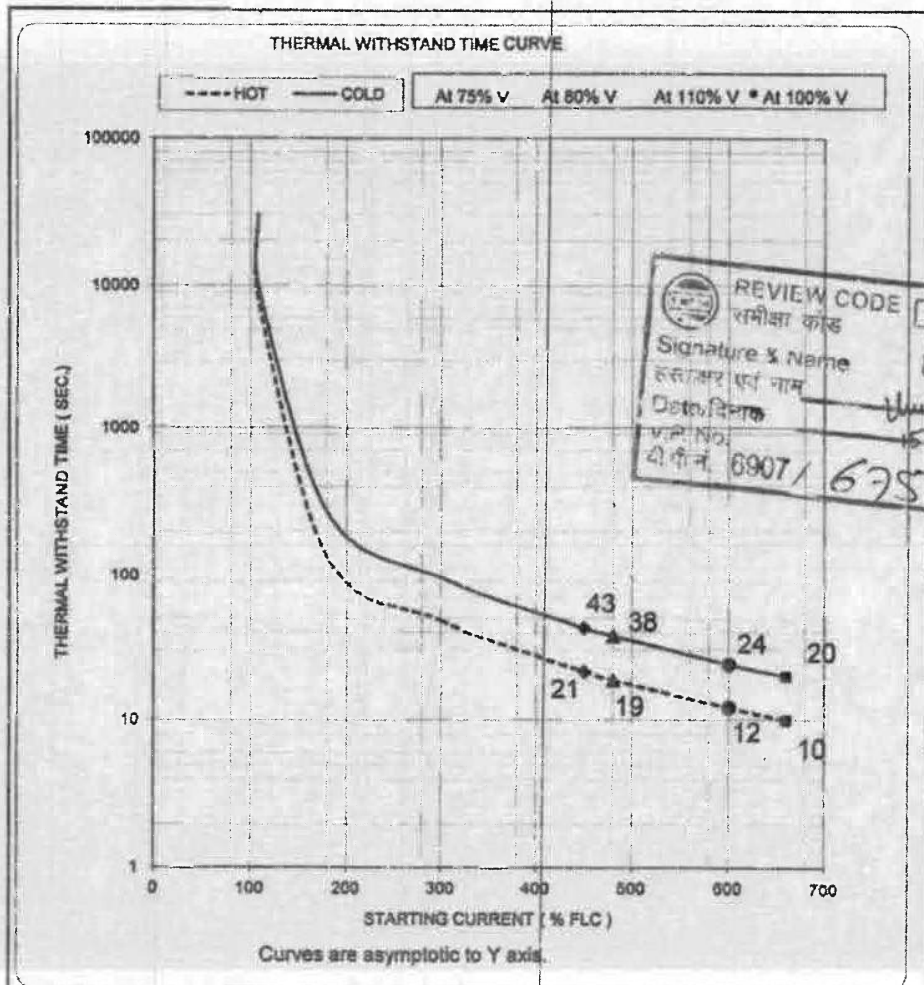
 Crompton Greaves Limited LT Motors Division Ahmednagar	TITLE TERMINAL BOX ARRANGEMENT	SEA4290R3
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Purchaser	Sundyne Asia Japan Co. Ltd
Owner/User	Brahmaputra Cracker & Polymer Ltd.
Location	Lepetkata, India
P.O.#	BCPL/C&P/6907/MR-549
Model Type	LMV-311
Item #	117-PA-943
Service	Pentane Startup Pump
Serial No.	A1995277-11



PROVIDED	SPACE HEATER	THERMISTOR	ET SIZE	RTD
CABLE SIZE	YES	NA		NA
MAIN CABLE SIZE:	1X2CX2.5mm ²	NA	1.5" BSC 1-No.	NA
CUSTOMER:	SUNDYNE CORPORATION		kW	30
P.O.NO	1523765 OP		FRAME	ND200L
IND.NO:	0413549346/500		POLE	2
CLIENT:	Tag No. 117-PM-943			
PROJECT:				
DRN	NAME	DATE	ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED	
CHD	SBK	18/10/11	SCALE: NTS	
	SBK	18/10/11	Rev.	
APPROVED	DNB	18/10/11	Dt.	
 Crompton Greaves Limited LT Motors Division Ahmednagar			TITLE TERMINAL BOX ARRANGEMENT	SEA4296R3

Purchaser	Sundyne Asia Japan Co. Ltd
Owner/User	Brahmaputra Cracker & Polymer Ltd.
Location	Lepakata, India
P.O.#	BCPL/C&P/8907/MR-549
Model Type	LMV-311
Item #	117-PA-843
Service	Pentane Startup Pump
Serial No.	A1995277-11

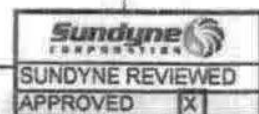


CUSTOMER	SUNDYNE CORPORATION	KW	30
P.O.NO	1523785 OP	FRAME	ND200L
IND.NO	0413549348/500	POLE	2
CLIENT		TAG NO.	117-PM-943
PROJECT			
DRN	PP	18-Oct-11	Dt.
CHD	SSN	18-Oct-11	
APPROVED	DNB	18-Oct-11	



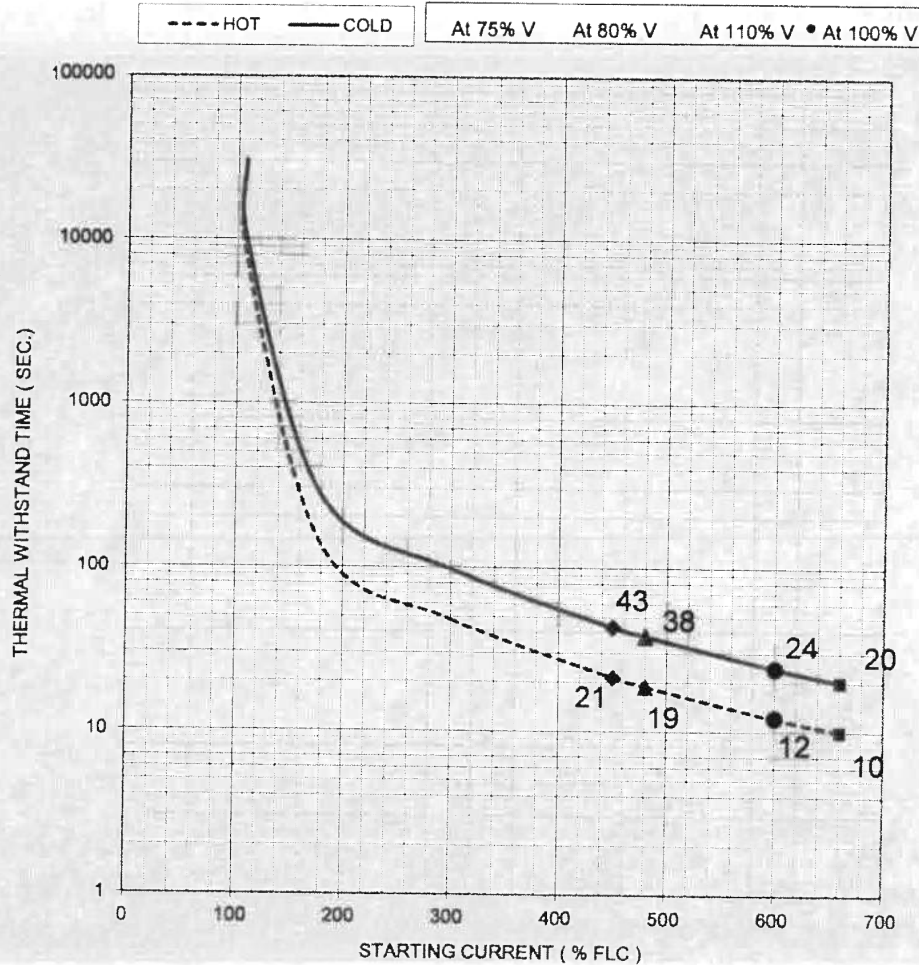
Crompton Greaves Limited
LT Motors Division
Ahmednagar

TITLE
THERMAL WITHSTAND TIME CURVE
SC12/24/600

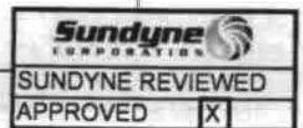


Purchaser	Sundyne Asia Japan Co. Ltd
Owner/User:	Brahmaputra Cracker & Polymer Ltd.
Location:	Lepatkata, India
P.O.#:	BCPL/C&P/6907/MR-549
Model Type	LMV-311
Item #:	117-PA-943
Service:	Pentane Startup Pump
Serial No.:	A1995277-11

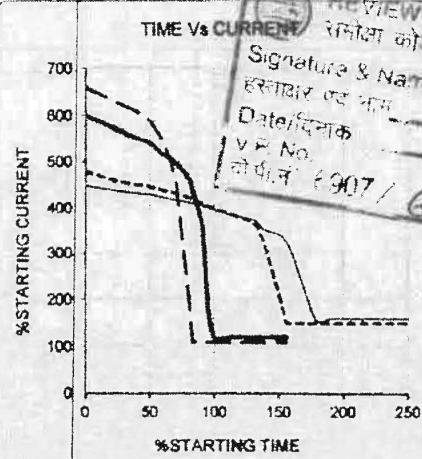
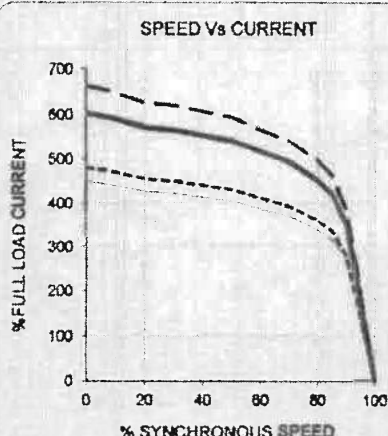
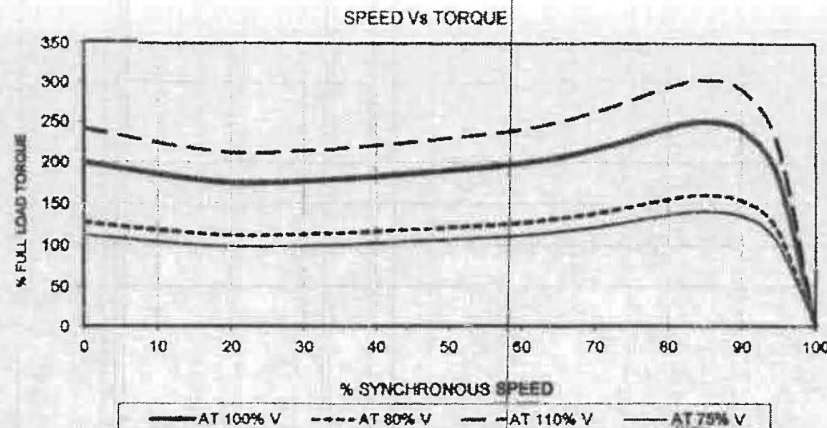
THERMAL WITHSTAND TIME CURVE



CUSTOMER	SUNDYNE CORPORATION			kW	30
P.O.NO	1523765 OP			FRAME	ND200L
IND.NO:	0413549346/500			POLE	2
CLIENT:				TAG NO.	117-PM-943
PROJECT:					
	NAME	DATE	Rev.		
DRN	PP	18-Oct-11	Dt.		
CHD	SSN	18-Oct-11			
APPROVED	DNB	18-Oct-11			
 Crompton Greaves Limited LT Motors Division Ahmednagar			TITLE THERMAL WITHSTAND TIME CURVE SC12/24/600		



Purchaser:	Sundyne Asia Japan Co. Ltd
Owner/User:	Brahmaputra Cracker & Polymer Ltd.
Location:	Lepetkata, India
P.O.#:	BCPL/C&P/8907/MR-549
Model Type:	LMV-311
Item #:	117-PA-943
Service:	Pentane Startup Pump
Serial No.:	A1995277-11



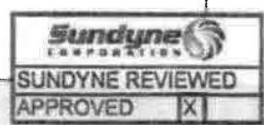
REVIEW CODE 1 2 3
 Signature & Name
 हस्ताक्षर एवं नाम
 Date/दिनांक
 v.m. No.
 को पी.नं. 8907/6757

CUSTOMER	SUNDYNE CORPORATION	KW	30
P.O.NO	1523785 OP	FRAME	ND200L
IND.NO	0413549346/500	POLE	2
CLIENT:		TAG NO.	117-PM-943
PROJECT:			
DRN	PP	DATE	18-Oct-11
CHD	SSN	DATE	18-Oct-11
APPROVED	DNS	DATE	18-Oct-11



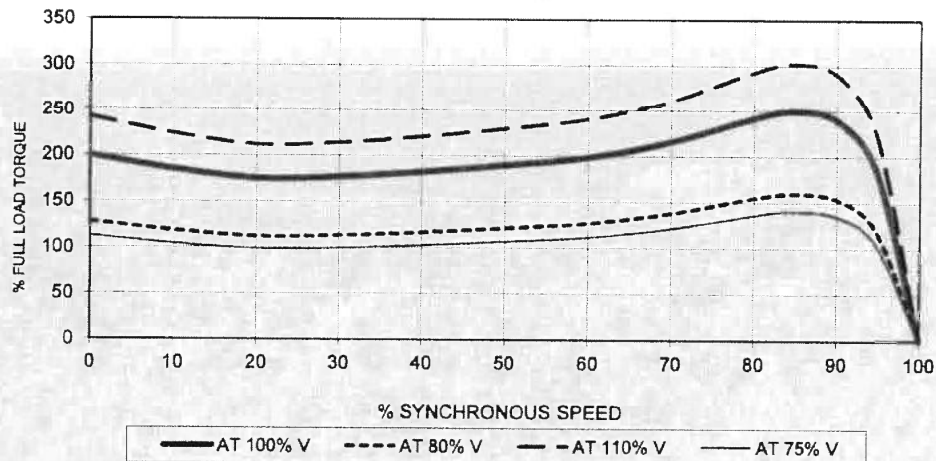
Crompton Greaves Limited
 LT Motors Division
 Ahmednagar

TITLE
 TORQUE SPEED CURVE
 SC12/24/600

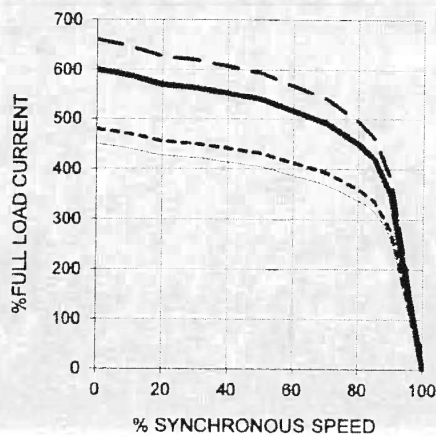


Purchaser	Sundyne Asia Japan Co. Ltd
Owner/User:	Brahmaputra Cracker & Polymer Ltd.
Location:	Lepetkata, India
P.O.#:	BCPL/C&P/6907/MR-549
Model Type	LMV-311
Item #:	117-PA-943
Service:	Pentane Startup Pump
Serial No.:	A1995277-11

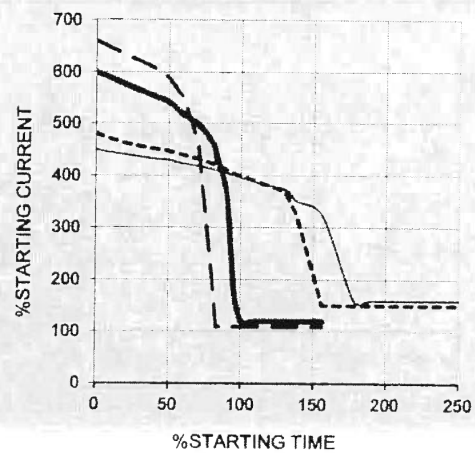
SPEED Vs TORQUE



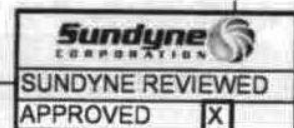
SPEED Vs CURRENT



TIME Vs CURRENT



CUSTOMER	SUNDYNE CORPORATION	kW	30
P.O.NO	1523765 OP	FRAME	ND200L
IND.NO:	0413549348/500	POLE	2
CLIENT:		TAG NO.	117-PM-943
PROJECT:			
DRN	PP	18-Oct-11	Rev.
CHD	SSN	18-Oct-11	Dt.
APPROVED	DNB	18-Oct-11	
 Crompton Greaves Limited LT Motors Division Ahmednagar		TITLE TORQUE SPEED CURVE SC12/24/800	





CROMPTON GREAVES LTD. - LT MOTORS DIVN., AHMEDNAGAR

DATE: 22.12.2012

3 PH INDUCTION MOTOR TYPE TEST RESULT

RATING PLATE DETAILS

MACHINE No.	XNANM31024DV			
KW	30	HP	50	
RPM	2950	RTG	CONT	
AMPS	52	DELTA	DUTY	S1
VOLTS	415	HZ	50	
CLASS	F			
FRAME	ND200L	POLE	2	
AMB °C	45			

CUSTOMER : M/S. SUNDYNE CORPORATION
P.O. No. : 1523765 OP
INDENT No. : 413549346 000500
ENCLOSURE : TEFC
TYPE : SCR MTG. V1
PROTECTION : IP55 NON SPARKING TYPE "n"
BEARING : (DE/ODE) 6312-2RS/6212-2RS
SPACE HEATER 60 WATT 1 NO RESI 898 OHMS
Ia/In 6.00 IE (secs) 12 TEMP CL - T3

STATOR

COLD RESISTANCE BETWEEN TERMINAL

0.15300 0.15300 0.15300 OHM at °C 24.0

HOT RESISTANCE BETWEEN TERMINAL

0.19500 0.19400 0.19200 OHM

RESISTANCE - R95

0.292 OHM

INSULATION RESISTANCE BEFORE & AFTER HV TEST STATOR =>200 MEG OHM

HV TEST AT 2 KV FOR 1 MIN. STATOR = OK

LOW VOLTAGE REVERSAL AT 240V - OK

60% OVERLOAD TEST FOR 15 SEC. - OK

20% OVERSPEED TEST FOR 2 MINS. - OK

LOAD	VOLT	AMPS			WATTS		INPUT		Hz	RPM	% SLIP	TIME	TEMP	
		I1	I2	I3	W1	W2	MF	KW					AMB	BODY
1/2	415	30.0	29.0	29	75	30	160	16.80	49.72	2956	0.912			
3/4	415	39.0	39	40	102	53	160	24.80	49.69	2942	1.322			
FULL	415	52	51.0	53	135	70	160	32.80						
	415	52	51.0	53	135	70	160	32.80				11.00	24.00	24.00
	415	52	51.0	53	135	70	160	32.80				11.30	24.50	40.00
	415	52	51.0	53	135	70	160	32.80				12.00	25.00	45.00
	415	52	51.0	53	135	70	160	32.80				12.30	25.00	48.00
	415	52	51.0	53	135	70	160	32.80				1.00	25.50	50.00
	415	52	51.0	53	135	70	160	32.80				1.30	25.50	51.00
	415	52	51.0	53	135	70	160	32.80				2.00	25.50	51.50
NO LOAD	415	13.0	12.5	13.0	315	-190	10	1.25	49.79	2932	1.85	2.30	26.00	51.50

S.C. VOLT	S.C. AMPS			S.C. KW				STARTING TORQUE (KGM)		STG.T %FLT
	READING	MF	AMP	W1	W2	MF	TOTAL	READING	CALC. TO RATED VOLT	
93	2.6	20	52	20	0	160	3.2	0.2		
240								6.8	20.33	205.3

RESULTS	STG.T %	STG. C	SLIP	EFFICIENCY			POWER FACTOR			TEMP RISE °C
	% FLT	% FLC	%	FL	3/4FL	1/2FL	FL	3/4FL	1/2FL	
TESTED	205.3	446.24	1.85	91.72	91.63	90.06	0.88	0.88	0.80	66.84
COMMITTED	200.0	600.00	1.67	91.50	91.00	89.00	0.87	0.84	0.80	75
TESTED OUTPUT KW				30.08	22.73	15.130				

VIBRATION (mm/sec) -	VERTICAL	1.3	RADIAL	1.0	AXIAL	1.5
NOISE LEVEL (d B A) -	ANNEX					

MAHESH CHAVAN
CGL

TYPE TEST CALCULATION SHEET

MACHINE No.	XNANM31024DV
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STATOR RESISTANCE		Amb°C
1 COLD (Ohm)	0.1530	24
2 HOT (Ohm)	0.1937	26.00
3 RESISTANCE (Ohm) at 95 deg C	0.19494	

PERFORMANCE CALCULATION

4 NO LOAD CURRENT (Amps)	12.83
5 NO LOAD POWER INPUT (Watt)	1250

6 IRON LOSS = (5) - (4) X 2 (Watts)	1202.16
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PERFORMANCE	LOAD		
	1 / 2	3 / 4	F.L.
7 LOAD CURRENT (Amps)	29.33	39.33	52.00
8 LOAD POWER INPUT (Watt)	16800.00	24800.00	32800.00
9 SLIP	0.0091	0.0132	0.0185
10 COPPER LOSS (Watts) = (7)² X (3)	251.61	452.40	790.69
11 STATOR LOSS (Watts) = (6) + (10)	1453.76	1654.55	1992.84
12 STATOR OUTPUT (Watts) = (8) - (11)	15346.24	23145.45	30807.16
13 ROTOR COPPER LOSS (Watts) = (12) X (9)	139.92	305.87	571.31
14 TOTAL LOSS (Watts) = (11) + (13)	1593.68	1960.43	2564.15
15 OUTPUT POWER AT AIRGAP (Watts) = (8) - (14)	15206.32	22839.57	30235.85
16 OUTPUT AT SHAFT AFTER 0.5% STRAY LOAD LOSS (Watts) = (15) x 0.995	15130.28	22725.38	30084.67
17 EFFICIENCY % = (16) / (8) X 100	90.06	91.63	91.72
18 POWER FACTOR = (8) / Volt x (7) x Sqrt 3	0.797	0.88	0.88
19 TEMPERATURE RISE BY RESISTANCE (deg C)			
	((2)-(1)) / (1) X (235 + Amb at start) - (amb at end - amb at start) =		
20 %STG. CURRENT = (RATED VOLT/TEST VOLT) X (TEST CURRENT/F.L.CURRENT) X 100 =	66.84	Deg Cel.-For Stator	
21 %STG. TORQUE = (RATED VOLT/TEST VOLT)² X (TEST TORQUE/F.L.TORQUE) X 100 =			205.27

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ANNEXTURE

MACHINE NO:	XNANM31024DV	INDENT NO:	413549346 000500
KW	30	SPEED	2950
CUSTOMER	M& P LTD.		

SR.NO.		
1	SPACE HETER RESISTANCE -OHMS	462
2	H.V. TEST at 1.5 Kv for 1 Minutes for Space heater	OK
3	H.V. TEST at 2.0 Kv for 1 Minutes Stator winding	OK
4	Insulation resistance (Megger value) more than 100 Mega ohms	
5	Rotor Air Gap Distance in mm	0.89
6	Starting time in sec	0.0014
7	vibration level: Axial 1.1 / Radial 1.0 / Transverse 1.0 mm/sec	
8	Noise level: (Side) fan cover 84.3 , T.Box 81.6 , Shaft 83.6 DbA	
9	1 mm copper wire insertion tested OK.	

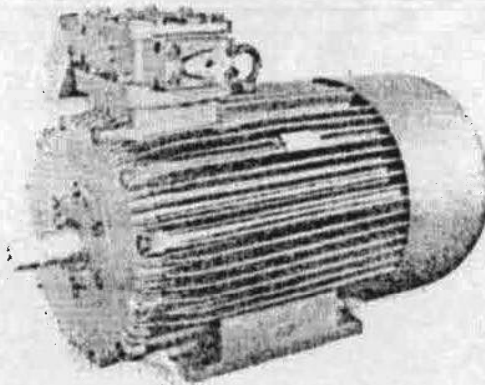
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 Crompton Greaves Ltd. LT Motors Division : Industrial Systems,		CERTIFICATE OF ROUTINE TEST FOR 3 PHASE INDUCTION MOTOR			
CUSTOMER ORDER NO. & DATE INDENT NO. & DATE		SUNDYNE CORPORATION 1523765 OP 413549346		19.07.11 TEST DATE : 20.12.11	
MOTOR NO. KILO WATT VOLTS AMPS - CONN RPM Tag No		XNANM31023DV 30.00 415+-10% 52.00 MESH 2950 117-PM-943 A		FRAME DUTY FREQ RATING AMB. ND200L S1 50+-5% CONT 45 °C	
				EXCISE REF. NO. INSU. CLASS EFF (FL) KLEM0285 F 91.50 % Ia/In : 6.0 Time tE : 12 Temp class : T3	
BEARING DE/ODE SHAFT SPACE HEATER THERMISTOR RESISTANCE BETWEEN TERMINAL		6312-2RS/6212-2RS 60 W X 1, 240 V STATOR 0.155 $\Omega/m\Omega$ ROTOR -- $\Omega/m\Omega$		MOUNTING DEG. OF PROTN V1 IP55 ENCLOSURE TYPE NON SPARKING SCR Motor	
				at Amb 024 °C	
TEST	VOLTS	AMP1	AMP2	AMP3	WATTS
NO LOAD	415	13.00	13.00	13.00	1,350
LOCKED ROTOR	091	52.00	52.00	52.00	3,270
INSULATION RESISTANCE (BEFORE AND AFTER HV TEST) REDUCED VOLTAGE RUNNING UP TEST AT $1/\sqrt{3}$ RATED VOLTAGE HIGH VOLTAGE TEST AT 2000 V FOR 1 MIN. OPEN CIRCUIT ROTOR VOLTS (FOR SR MOTORS ONLY)				ABOVE 150 MEGAOHM OK OK	
OTHER DETAILS : NL RPM : 2994 at 49.98 Hz					
TEST WITNESSED BY :					
WE CERTIFY THAT THIS MOTOR HAS BEEN ROUTINE TESTED AS PER IS 325 - 1996 Complying with IS:9628-1982/IS:325-1996/IS:1231-1974 ADDRESS : A - 8/2, MIDC AREA, AHMEDNAGAR - 414 111. GRAM : CROMGRE, PHONE : (0241) 2777372, 74, 75, 76, 78, FAX : (0241) 2777508					 Chetan Wadkar QUALITY ASSURANCE LT MOTORS DIVISION

 Crompton Greaves Ltd. LT Motors Division : Industrial Systems,		CERTIFICATE OF ROUTINE TEST FOR 3 PHASE INDUCTION MOTOR			
CUSTOMER ORDER NO. & DATE INDENT NO. & DATE		SUNDYNE CORPORATION 1523765 DP 413549346		19.07.11 TEST DATE : 20.12.11	
MOTOR NO. KILO WATT VOLTS AMPS - CONN RPM Tag No		XNANM31024DV 30.00 415+-10% 52.00 MESH 2950 117-PM-943 B		FRAME ND200L DUTY S1 FREQ 50+-5% RATING CONT AMB. 45 °C Ia/In : 6.0 Time tE : 12 Temp class : T3	
BEARING DE/ODE SHAFT SPACE HEATER THERMISTOR RESISTANCE BETWEEN TERMINAL		6312-2RS/6212-2RS 60 W X 1, 240 V STATOR 0.153 $\Omega/m\Omega$ ROTOR $\Omega/m\Omega$ at Amb 024 °C		MOUNTING V1 DEG. OF PROTN IP55 ENCLOSURE NON SPARKING TYPE SCR Motor	
TEST	VOLTS	AMP1	AMP2	AMP3	WATTS
NO LOAD	415	13.00	13.20	13.20	1,390
LOCKED ROTOR	091	52.00	52.00	52.00	3,310
INSULATION RESISTANCE (BEFORE AND AFTER HV TEST) REDUCED VOLTAGE RUNNING UP TEST AT 1/√3 RATED VOLTAGE HIGH VOLTAGE TEST AT 2000 V FOR 1 MIN. OPEN CIRCUIT ROTOR VOLTS (FOR SR MOTORS ONLY)			ABOVE 150 MEGAOHM OK OK		
OTHER DETAILS : NL RPM : 2988 at 49.88 Hzs					
TEST WITNESSED BY :					 Chetan Wadka QUALITY ASSURANCE LT MOTORS DIVISION
WE CERTIFY THAT THIS MOTOR HAS BEEN ROUTINE TESTED AS PER IS 325 - 1996 Complying with IS:9628-1982/IS:325-1996/IS:1231-1974 ADDRESS : A - 6/2, MIDC AREA, AHMEDNAGAR - 414 111. GRAM : CROMGRE, PHONE : (0241) 2777372, 74, 75, 76, 78, FAX : (0241) 2777508					
FORMAT NO. : QEF 12 OCT. 09					



**Installation and
Maintenance
Instructions for
FLAMEPROOF
Induction Motors**



AVANTHA

Crompton Greaves Limited
LT Motors Division
A-6/2 MID C - Ahmednagar 414111